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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,645	06/01/2001	Jeyhan Karaoguz	41996/CAG/B600	1717

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EXAMINER	
KIM, KEVIN	

ART UNIT	PAPER NUMBER
2638	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/872,645	KARAOGUZ, JEYHAN	
	Examiner	Art Unit	
	Kevin Y. Kim	2638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,13,22,28-30,34,40-42,45,52 and 58-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4,13,22,34,45,52 and 58-62* is/are allowed.

6)☒ Claim(s) *28-30 and 40-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed November 21, 2004 with respect to claims 28 and 40 have been fully considered but they are not persuasive.

Applicant argues that an external control unit controls the interface in the claimed invention while in the cited prior art reference the switch 43 (i.e., an interface) is controlled by the constituent encoders, quoting col5, lines 50-52. The description "[t]he first **21** and second **23** encoders switch input from the original information **25** and permuted **37** bit streams to feedback **41** from the first **21** encoder" merely explains that the input to the respective encoders 21 and 23 is switched from a data input bit to a feedback bit. The encoders do not have any control over the switches 43 and 45. In other words, as a result of switching operation at the switches 43 and 45, a different bit is inputted to the encoders. If applicant's reading of the reference were true, a control line, other than illustrated two input lines to the switch and one output from the switch, must be provided from the encoders to the switch. Thus, an external control unit (with respect to the encoders) is required to switch between line 27 and line 41 in the prior art reference.

The ground of rejection has been changed because of a newly found prior art better establishing a turbo encoder (such as disclosed by the Shin patent) coupled to an RF stage in an RF communication transmitter. In addition, claims 29, 30, 41 and 42 are newly rejected in view of an admitted prior art.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 28 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin (previously cited) in view of Mogre et al (US 6,987,543).

Shin discloses (see Fig.6) an encoder (17) comprising,

"a state machine" (21) for generating a plurality of state bits, and

"an interface" (43) to couple an input (41) relating to one of the state bits into the state machine during a time period. Though not described, "a transmit control unit" is required to operate the switches (43,45) to switch between line 27 and line 41. Shin is silent on whether the encoder (17) is used in an RF communication and more specifically as an integral part coupled to an RF stage, also an integral part of a transmitter.

Mogre et al teaches the use of an encoder such as disclosed by Shin in an RF transmitter. See Fig.1 which shows a turbo encoder (110) coupled to a modulator (114, i.e., an RF stage) of a transmitter (100). Thus, it would have been obvious to one skilled in the art to arrange the encoder of Shin coupled to the RF stage of an RF transmitter, wherein the encoder and the RF stage are each an integral part of the transmitter, as taught by Mogre et al, for the purpose of improving the bit error rate performance in an RF communication.

Claim Rejections - 35 USC § 103

3. Claims 29, 30, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin in view of Mogre et al, as applied to claim 28 above in view of an admitted prior art.

Shin in view of Mogre et al disclose all the subject matter claimed except for a preamble generator and a CRC generator. However, as admitted by applicant at page 2 of the present application. A preamble generator and a CRC generator are elements of a typical trellis encoder such as disclosed by Shin. Thus, it would have been obvious to one skilled in the art at the time the invention was made to add a preamble generator and a CRC generator to the encoder of Shin to generate a standard data frame.

Allowable Subject Matter

4. Claims 4,13, 22 34, 45, 52,58-62 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kevin Kim/

KEVIN KIM
PATENT EXAMINER